

Foreword

This special issue of "Antarctic Record" is the proceedings of the symposium on rocket-borne experiments in Antarctica, which was organized by National Institute of Polar Research, Japan on the 3rd of July 1974.

Nineteen papers in this issue can be classified into two groups; namely, (a) nine scientific reports of rocket-borne measurements of the polar upper atmospheric phenomena, which have been carried out at Syowa Station Space Center during the period from 1970 to 1973, and (b) ten new proposals of experimental programs by means of sounding rockets at the Space Center in the future, particularly for the International Magnetospheric Study (IMS) period.

Syowa Station Space Center was open in the beginning of 1970 for the purpose of direct measurements of the polar substorm phenomena in a close co-ordination with the ground-based observation system which have been actively operated. Experimental facilities in this space center is described in the first paper by AYUKAWA *et al.*

To date, sounding rockets of S-160 and S-210 types have been launched mostly in the Antarctic winter season. The scientific reports in this issue describe the preliminary results of experiments with the aid of these rockets. It is strongly hoped, however, that the synthetic studies on the polar upper atmospheric phenomena based on the combination of both rocket-borne and ground-based observations will be reported in the near future.

As the IMS programs at Syowa Station Space Center, rocket-borne experiments by means of sounding rockets of S-310 type as well as S-210 one are planned together with an extension of the ground-based observation facility. Various new proposals of rocket-borne experiments in this issue are concerned with these coming IMS programs. These proposals in the printed form will be further discussed in detail, and finally screened programs will be implemented at the Space Center during 1976-1978.

Any comment on the experimental results and the new proposals in this issue, addressed to the Director of National Institute of Polar Research, should be highly welcome.

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